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10/068,509	02/06/2002	Michael F. Durina		9513

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EXAMINER

COOLEY, CHARLES E

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,509

Applicant(s)

DURINA, MICHAEL F.

Examiner

Charles E. Cooley

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) = ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 6 FEB 2002 has been considered by the examiner. Note the attached PTO-1449 form. The documents crossed through fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. These documents are not present in the scanned file.

Specification

2. The disclosure is objected to because of the following informalities:
 - a. Page 4: the patent numbers should be separated by commas.
 - b. The end of page 7 to the beginning of page 8 is missing text.
 - c. Page 12, line 2: "We claim" should be --I claim—for a sole inventor.Appropriate correction is required.
3. The abstract of the disclosure is objected to because it is too long and contains improper legal phraseology. Correction is required. See MPEP § 608.01(b).
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

Art Unit: 1723

abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The title of the invention acceptable.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

The meaning of the claim language "un-harmonious" throughout the claims is not understood in the context thereof. Claim language such as "un-harmonious"

(claims 1 and 3) and "greater or smaller" (claim 6) are indefinite since the language is not compared to a reference or standard which gives meaning to the language.

Terms such as "the root and flight transition" lack antecedent basis (see claim 1, line 11).

The claim language "from time to time" does not particularly point out and distinctly claim the subject matter which applicant regards as the invention and renders the claim of indeterminate scope. This language appears to be a conditional limitation and fails to recite where on the screw the claimed configuration exists.

Claim language which makes reference to variables (such as "said geometry dependent upon such factors as the flighted length to screw diameter ratio, screw diameter, and resin composite" – claim 1) also does not particularly point out and distinctly claim the subject matter which applicant regards as the invention and renders the claim of indeterminate scope. Also note such language in claims 7 and 8.

The term "normal flight depth" and "normal flight pitch" in claim 5 are relative terms which render the claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 9 is missing text between pages 13 and 14 and thus is fragmented. The claim is not in proper claim format because it has multiple ending punctuation in the body of the claim. Claim 9 is narrative in form. The claim is therefore incomprehensible.

The claims are being treated on the merits to the extent they are understood.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Peters et al. (US 3,368,724).

The patent to Peters et al. discloses a flighted screw in a barrel with feed, transition and metering sections with the recited multiple increases in flight pitch in the metering section as seen in Figures 1A and 1B. Note the pitch at section D is greater than the pitch at section A which is greater than the pitch denoted at section III.

10. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Rauwendaal (US 4,129,386).

The patent to Rauwendaal discloses a flighted screw in a barrel with feed, transition and metering sections with the recited increase in flight pitch in the metering section C as seen in Figure 3. Note the pitch at section C is greater than a pitch at section B.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Brambilla (US 5,088,914).

The patent to Brambilla discloses a flighted screw in a barrel with feed, transition and metering sections with the recited increase in flight pitch in the metering section 32 as seen in Figure 1. Note the pitch at section 32 is greater than a pitch at section 26.

12. Claims 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Colby (US 4,752,136).

The patent to Colby discloses a flighted screw in a barrel; the primary flights 20 forming a helical valley; the screw having a downstream metering section; the screw having the recited cross channel barrier flights 34 extending from the helical valley and intersecting with the primary flights.

13. Claims 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Koch et al. (US 3,687,423).

The patent to Koch et al. discloses a flighted screw in a barrel; the primary flights 2 forming a helical valley; the screw having a downstream metering section; the screw having the recited cross channel barrier flights 3 extending from the helical valley and intersecting with the primary flights.

Art Unit: 1723

14. Claims 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Koch (US 4,092,015).

The patent to Koch et al. discloses a flighted screw in a barrel; the primary flights 6 forming a helical valley; the screw having a downstream metering section; the screw having the recited cross channel barrier flights 15 extending from the helical valley and intersecting with the primary flights.

15. Claims 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kovacevic (US 5,961,209).

The patent to Kovacevic discloses a flighted screw in a barrel; the primary flights 22 forming a helical valley; the screw having a downstream metering section; the screw having the recited interrupted helical intra-flights 30 extending from the helical valley.

16. Claims 5, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 88/01227.

WO 88/01227 discloses a flighted screw in a barrel; the primary flights 18 forming a helical valley; the screw having a downstream metering section; the screw having the recited interrupted helical intra-flights (at section Z – Figure 2A) extending from the helical valley; the screw having the recited increase in flight pitch in the downstream metering section as seen in Figure 2A. Note the pitch after location X is greater than a pitch prior to location X.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (703) 308-0112. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Charles E. Cooley
Primary Examiner
Art Unit 1723

5 September 2003